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G. Huang, D. Metaxas, M. Govindaraj

 July 2003 **Proceedings of the 2003 ACM SIGGRAPH/Eurographics Symposium on Computer animation**

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2 [Predicting the drape of woven cloth using interacting particles](#)

David E. Breen, Donald H. House, Michael J. Wozny

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Keywords: Kawabata Evaluation System, cloth, drape, particle systems, physically-based modeling

3 [Predicting reflectance functions from complex surfaces](#)

Stephen H. Westin, James R. Arvo, Kenneth E. Torrance

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Luis Rene Contreras, Chirag Modi, Arunkumar Pennathur

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This paper presents results from a case study in predictive maintenance at a distribution warehouse. A simulation model was built with ARENATM 5.0 for integrating predictive maintenance strategies with production planning strategies, for a conveyor system. Equipment health was monitored using condition-based parameters such as temperature and vibration for mechanical and electrical components such as rollers, electrical motors, and gearboxes. This diagnostic information was ...

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Keywords: Kawabata Evaluation System, cloth, drape, particle systems, physically-based modeling

2 [Applications of visualization: Ideal, real and virtual textile structure modelling and visualization](#)



Miloslav Kosek, Tomas Mikolanda, Bohumila Koskova

 November 2004 **Proceedings of the 3rd international conference on Computer graphics, virtual reality, visualisation and interaction in Africa**

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Usually the software for textile visualization uses ideal model based on simplified structure assumptions that may not be in a good agreement with reality. Real model reconstructs a small volume of structure from 2D parallel cuts. Proposed virtual model joins both the models. In general, any structure parameter consists of two parts: fixed and variable. Specific statistical methods make possible to determine or generate both the components, if there are many photographs of random cuts. The co ...

Keywords: FFT, OpenGL, VRML, image processing, virtual reality

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5 Tangible ideas for children: materials sciences as the future of educational technology

Michael Eisenberg

June 2004 **Proceeding of the 2004 conference on Interaction design and children: building a community**

Full text available:  pdf(490.58 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Traditionally, the notion of "educational technology" has been equated with "educational computing". While computer technology is, and will continue to be, a central focus of educational technology, its importance is likely to be rivaled in the coming generation by developments in materials science. This paper represents an early attempt to discuss the role of novel materials in educational settings, and in children's lives more generally. We discuss a variety of fascinating new materials, all o ...

Keywords: educational technology, materials science

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